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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,296	11/26/2003	Shinya Wada	SCEP 20.746 (100809-00226)	5553
26304 7590 11/16/2007 KATTEN MUCHIN ROSENMAN LLP 575 MADISON AVENUE NEW YORK, NY 10022-2585			EXAMINER BEMBEN, RICHARD M	
			ART UNIT 2622	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/723,296

Applicant(s)

WADA, SHINYA

Examiner

Richard M. Bemben

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-14 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/16/04, 8/9/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 7-22 in the reply filed on 19 September 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Attorney Interview

2. A telephone interview was conducted with Brian E. Hennessey (Reg. No. 51,271) on 24 October 2007 regarding claim dependencies. As a result of that interview the following claim amendments have been submitted:

Claim 9 depends on claim 8; Claim 13 depends on claim 11; Claim 14 depends on claim 12; Claim 15 depends on claim 11; Claim 16 depends on claim 12; Claim 17 depends on claim 11; and Claim 18 depends on claim 12.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 20 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 20 and 21 define a computer program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that

reason (i.e. "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 7-14 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Basilico (EP 0 980 181).**

[Claim 11] Basilico discloses an image processing apparatus comprising:

an image input unit for accepting a plurality of images shot by using a camera rotatably supported by a predetermined member from positions of different angles of rotation, with a direction generally perpendicular to a plane of rotation of said member as a shooting direction ([0005]-[0015]; Figs. 1A-C; [0025]-[0026]; [0030]-[0031]; Fig. 3);

an extracting unit for extracting images of objects to be parallel with each other from said plurality of images, respectively ([0030]-[0031]; Fig. 3, "16");

a tilt detecting unit for detecting the angles of rotation from tilts of said plurality of images, respectively, with reference to the images of said objects ([0031]; Fig. 3, "16");
and

a rotation processing unit for relatively rotating said plurality of images based on the angles of rotation to obtain images parallel with each other ([0030]-[0031]; Fig. 3, "16").

[Claim 12] Basilico discloses an image processing apparatus comprising:

an image input unit for accepting a plurality of images shot by using a camera rotatably supported by a predetermined member from positions of different angles of rotation, with a direction generally perpendicular to a plane of rotation of said member as a shooting direction ([0005]-[0015]; Figs. 1A-C; [0025]-[0026]; [0030]-[0031]; Fig. 3);

an angle input unit for acquiring data on the angles of rotation ([0030]-[0031]; Fig. 3, "16"); and

a rotation processing unit for relatively rotating said plurality of images based on the angles of rotation to obtain images parallel with each other ([0030]-[0031]; Fig. 3, "16").

[Claims 13 and 14] Basilico further discloses that said predetermined member is a generally annular rotor with its circular surface as the plane of rotation ([0025]; [0030]; Fig. 3, "2");

said camera is supported in a position near an outer periphery of said rotor, and when said rotor is rotated, makes a circular movement with a distance from the center of rotation as a radius ([0005]-[0015]; [0030]-[0031]; Fig. 3); and

said image input unit accepts said plurality of images shot from a plurality of positions in an orbit of said circular movement ([0030]-[0031]).

Claim 7 is a method claim corresponding to apparatus claim 11. Therefore, claim 7 is analyzed and rejected as previously discussed with respect to claim 11.

Claim 8 is a method claim corresponding to apparatus claim 12. Therefore, claim 8 is analyzed and rejected as previously discussed with respect to claim 12.

Claim 9 is a method claim corresponding to apparatus claim 13. Therefore, claim 9 is analyzed and rejected as previously discussed with respect to claim 13.

Claim 10 is a method claim corresponding to apparatus claim 13. Therefore, claim 10 is analyzed and rejected as previously discussed with respect to claim 13.

Claim 19 is a computer program claim corresponding to apparatus claim 11. It is inherent that the electronic device disclosed by Basilico contains a computer program in order to operate and fulfill the requirements of claim 11. Therefore, claim 19 is analyzed and rejected as previously discussed with respect to claim 11.

Claim 20 is a computer program claim corresponding to apparatus claim 12. It is inherent that the electronic device disclosed by Basilico contains a computer program in order to operate and fulfill the requirements of claim 12. Therefore, claim 20 is analyzed and rejected as previously discussed with respect to claim 12.

Claim 21 is a computer program claim corresponding to apparatus claim 11. It is inherent that the electronic device disclosed by Basilico contains a computer program in order to operate and fulfill the requirements of claim 11. Therefore, claim 21 is analyzed and rejected as previously discussed with respect to claim 11.

Claim 22 is a computer program claim corresponding to apparatus claim 12. It is inherent that the electronic device disclosed by Basilico contains a computer program in order to operate and fulfill the requirements of claim 12. Therefore, claim 22 is analyzed and rejected as previously discussed with respect to claim 12.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 11, 12, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,883,695 issued to Paul in view of Basilico.**

[Claim 11] Paul discloses an image processing apparatus comprising:

an image input unit for accepting a plurality of images shot by using a camera rotatably supported by a predetermined member from positions of different angles of rotation, with a direction generally perpendicular to a plane of rotation of said member as a shooting direction (c. 4, l. 45 – c. 6, l. 16; Figs. 1-5).

However, Paul does not disclose an extracting unit for extracting images of objects to be parallel with each other from said plurality of images; a tilt detecting unit for detecting the angles of rotation from tilts of said plurality of images, respectively, with reference to the images of said objects; and a rotation processing unit for relatively rotating said plurality of images based on the angles of rotation to obtain images parallel with each other.

Basilico discloses an image processing apparatus comprising:

an image input unit for accepting a plurality of images shot by using a camera rotatably supported by a predetermined member from positions of different angles of rotation, with a direction generally perpendicular to a plane of rotation of said member as a shooting direction ([0005]-[0015]; Figs. 1A-C; [0025]-[0026]; [0030]-[0031]; Fig. 3);

an extracting unit for extracting images of objects to be parallel with each other from said plurality of images, respectively ([0030]-[0031]; Fig. 3, "16");

a tilt detecting unit for detecting the angles of rotation from tilts of said plurality of images, respectively, with reference to the images of said objects ([0031]; Fig. 3, "16");
and

a rotation processing unit for relatively rotating said plurality of images based on the angles of rotation to obtain images parallel with each other ([0030]-[0031]; Fig. 3, "16").

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to rotation and image detection functionality disclosed by Basilico with the image capture disclosed by Paul in order to ensure the production of properly aligned stereoscopic images.

[Claim 12] Paul discloses an image processing apparatus comprising:

an image input unit for accepting a plurality of images shot by using a camera rotatably supported by a predetermined member from positions of different angles of rotation, with a direction generally perpendicular to a plane of rotation of said member as a shooting direction (c. 4, l. 45 – c. 6, l. 16; Figs. 1-5).

However, Paul does not disclose an angle input unit for acquiring data on the angles of rotation ([0030]-[0031]; Fig. 3, "16"); and a rotation processing unit for relatively rotating said plurality of images based on the angles of rotation to obtain images parallel with each other ([0030]-[0031]; Fig. 3, "16").

Basilico discloses an image processing apparatus comprising:

an image input unit for accepting a plurality of images shot by using a camera rotatably supported by a predetermined member from positions of different angles of rotation, with a direction generally perpendicular to a plane of rotation of said member as a shooting direction ([0005]-[0015]; Figs. 1A-C; [0025]-[0026]; [0030]-[0031]; Fig. 3);

an angle input unit for acquiring data on the angles of rotation ([0030]-[0031]; Fig. 3, "16"); and

a rotation processing unit for relatively rotating said plurality of images based on the angles of rotation to obtain images parallel with each other ([0030]-[0031]; Fig. 3, "16").

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to rotation and angle detection functionality disclosed by Basilico with the image capture disclosed by Paul in order to ensure the production of properly aligned stereoscopic images.

[Claims 17 and 18] It is inherent in the invention disclosed by Paul that when the stereoscopic image is created (interpolated, synthesized, etc.) from the plural images captured that the stereoscopic image is created based on the angle of rotation and the radius of rotation. Also refer to c. 5, ll. 24-45.

Allowable Subject Matter

9. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2622

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following disclose image capture with annular rotation in a direction perpendicular to the plane of rotation:

US Patent No. 1,957,043 issued to Harlow

US Patent No. 5,640,222 Issued to Paul

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Bemben whose telephone number is (571) 272-7634. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER